HIV AND AIDS IN SASKATCHEWAN, 2012

ANNUAL REPORT RELEASE DATE: NOVEMBER 30, 2013

Government of Saskatchewan
Ministry of Health
Population Health Branch

Purpose

This report examines HIV and AIDS surveillance data reported in Saskatchewan to provide an up-to-date profile of individuals diagnosed with HIV and AIDS in the province. The annual report focuses on those cases reported in 2012 within the context of trends and developments in the epidemiology of HIV in Saskatchewan from 2003-2012.

Summary:

This annual report provides an epidemiological review of HIV and AIDS surveillance data in Saskatchewan to the end of December 31st, 2012.

Prepared by:

Disease Prevention Unit, Population Health Branch, Saskatchewan Ministry of Health

Contact:

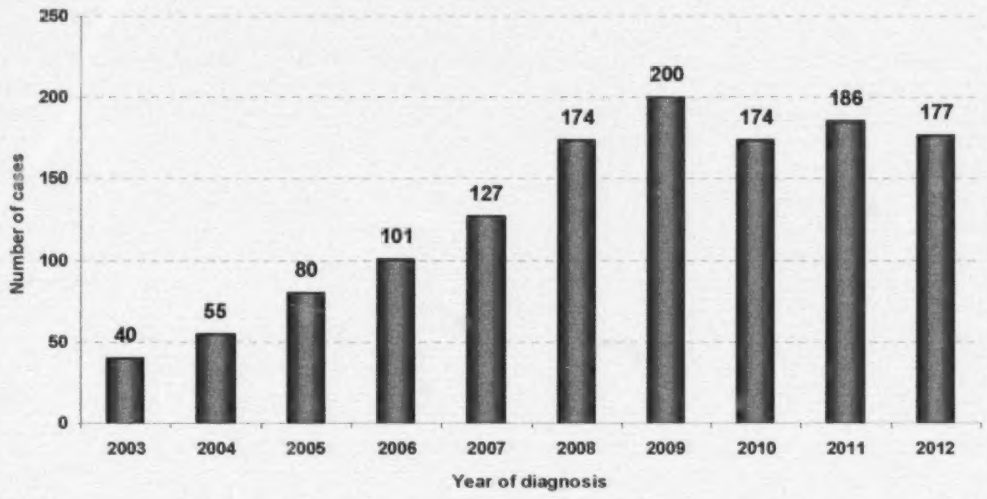
Val Mann, PhD
Chief Population Health Epidemiologist
Population Health Branch, Saskatchewan Ministry of Health
cdc@health.gov.sk.ca

The profile of people living with HIV in Saskatchewan

The number of newly identified HIV cases decreased slightly in 2012

In 2012, 177 HIV cases were reported in Saskatchewan, a five percent decrease compared to 2011 and 11% below the 200 cases in 2009. A total of 1,735 lab confirmed HIV cases have been reported since HIV monitoring began in 1985, 84% of whom have been diagnosed in the past 10 years. There was a steady increase in the annual number of HIV diagnoses from 40 cases in 2003 to a peak of 200 cases in 2009. (Figure 1) The trend in newly identified cases stabilized in the following three years. The peak in 2009 related, in part, to enhanced efforts to find new HIV cases who may have been infected for a number of years but were not aware of their need for testing.

Fig 1 **Number of newly identified HIV cases Saskatchewan 2003-2012**

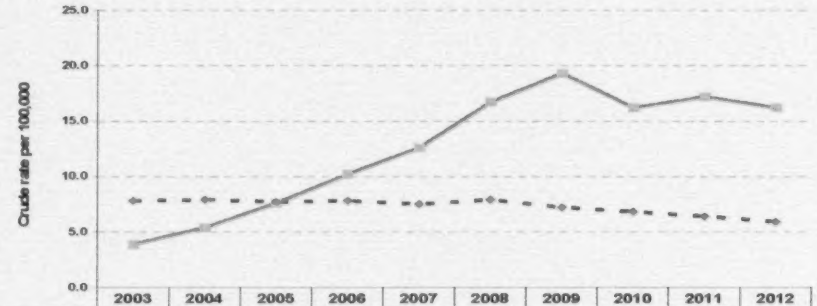


Beginning in 2003 a steady upward trend occurred in the rates of HIV cases reported in the province from 3.9 per 100,000 population to a peak in 2009 of 19.3 newly identified positive people per 100,000 population. The rate decreased to 16.2 cases per 100,000 in 2010 and has fluctuated slightly since. It remained at 16.2 cases per 100,000 population in 2012.

The national HIV rate remained stable between 2003 and 2008 then showed a slight decline in the following four years. By comparison, the Saskatchewan HIV rate surpassed the Canadian rate for positive HIV cases in 2006 and has remained over twice the national rate since 2008. (Figure 2)

Fig 2

Rate of HIV cases by year
Saskatchewan and Canada, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
SK	3.9	5.4	7.6	10.2	12.6	16.7	19.3	16.2	17.2	16.2
Cdn	7.8	7.9	7.7	7.8	7.5	7.9	7.2	6.8	6.4	5.9

Year of diagnosis

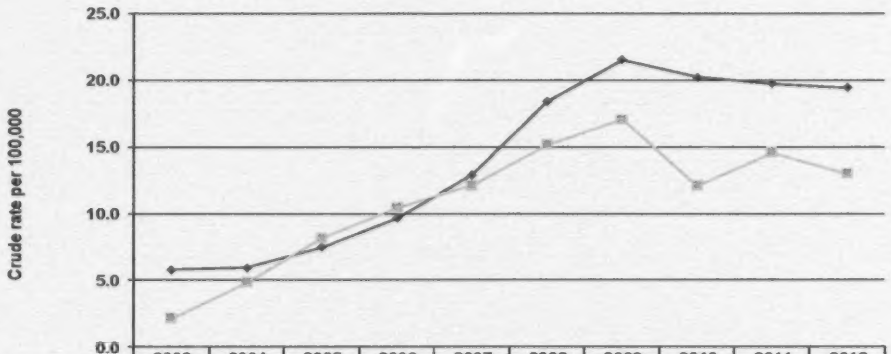
Canadian rates from the Public Health Agency of Canada

More men than women tested positive for HIV in 2012

Over the past ten years, male cases accounted for the majority of HIV positive cases in the province compared to females. In 2012 there were 106 male cases (60%) and 71 female cases. This difference is reflected in the gender rates per 100,000 population. (Figure 3) In 2010 the female rate dropped sharply but rebounded to 14.6 per 100,000 in 2011 with only a slight decrease to 13.0 per 100,000 in 2012. The drop in female cases in 2010 could be related to a number of reasons including fewer women presenting for testing rather than a true decrease in HIV infection among females. The male rate gradually decreased from a peak of 21.5 per 100,000 in 2009 to 19.4 per 100,000 in 2012.

Fig 3

HIV rates by gender
Saskatchewan, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Male rate	5.8	5.9	7.5	9.7	12.9	18.4	21.5	20.2	19.7	19.4
Female rate	2.2	4.9	8.2	10.5	12.1	15.2	17.1	12.1	14.6	13.0

Year of diagnosis

HIV affected a wide range of ages

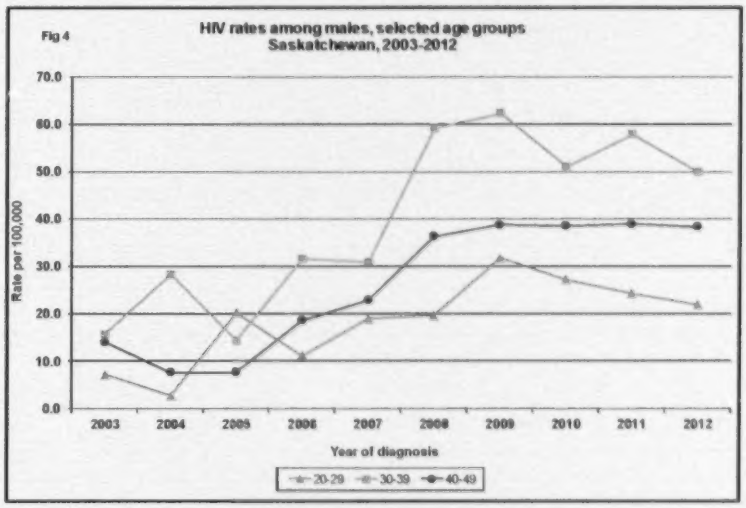
HIV male cases ranged in age from 14 to 78 years in 2012. Female cases ranged in age from 17 to 56 years. Altogether, HIV infected cases aged 20 to 49 years comprised 80% (142 cases) of the 177 cases in 2012, a proportion comparable to the previous three years.

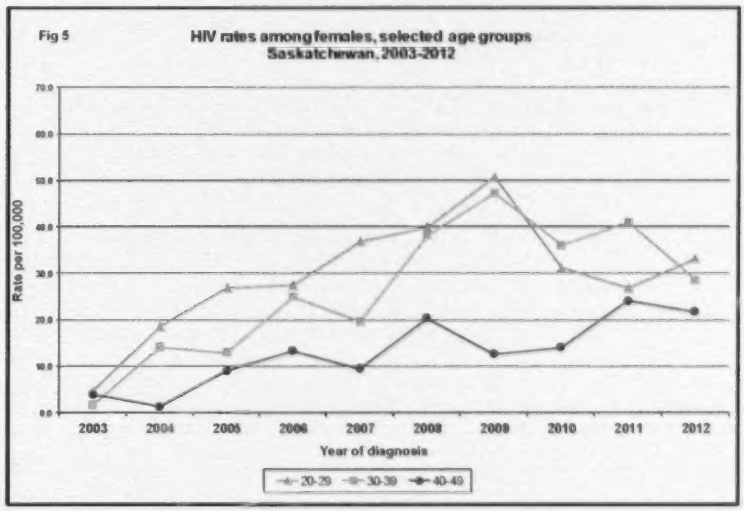
HIV rates declined among young males in 2012

Unlike 2010 and 2011 when males and females comprised an equal proportion of cases in the 20-29 year age category, female cases comprised 59% of cases in 2012 (26 female cases versus 18 male cases). The disease rate among males in this age group peaked at 31.8 per 100,000 in 2009 before a sustained decline to 21.9 in 2012. (Figure 4) By contrast, females in this age group declined to 26.9 per 100,000 in 2011 from a high of 17.1 per 100,000 but rebounded to 33.2 per 100,000 in 2012. (Figure 5)

The greatest burden of HIV illness was mainly among those 30 to 39 years of age.

Males aged 30-39 years accounted for 20% of all HIV cases in 2012 and just over one-third (34%) of total male cases (36 of 106 cases). Female cases aged 30-39 years comprised over one-quarter (28%) of total female cases in 2012 (20 of 71 cases). The male and female rate trend in this age group showed a parallel increasing pattern since 2004 which declined after a peak in 2009 with the male rate being an average of 13 points higher throughout the past ten years.

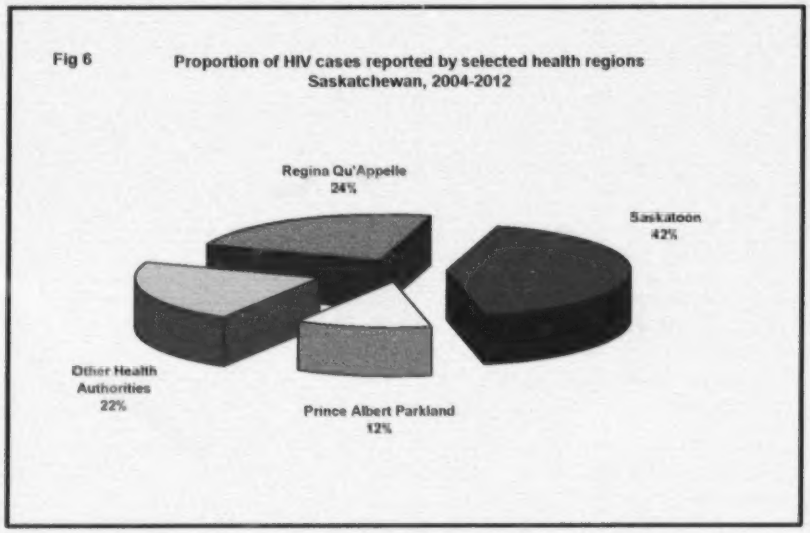




The majority of people living with HIV were from large urban centres

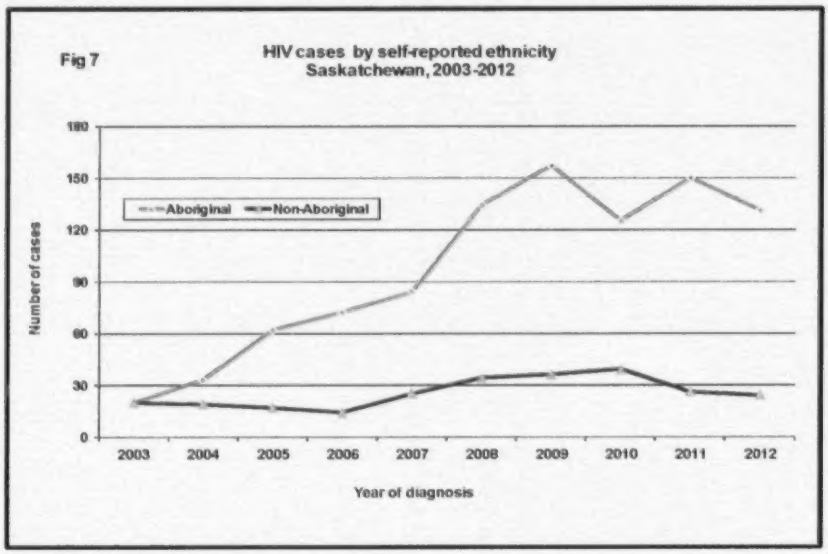
The highest proportion of HIV cases continues to be found in the health regions containing the province's three largest urban centres of Saskatoon, Regina and Prince Albert. This geographic distribution of HIV cases was seen even prior to 2004 when the number of HIV cases began to rise in the province.

From 2004 to 2012, 42% of the cases within the province have occurred in the Saskatoon Health Region, compared to Regina Qu'Appelle Heath Region (24%) Prince Albert-Parkland Health Region (12%). (Figure 6)



A high percentage of people living with HIV self-reported Aboriginal ethnicity

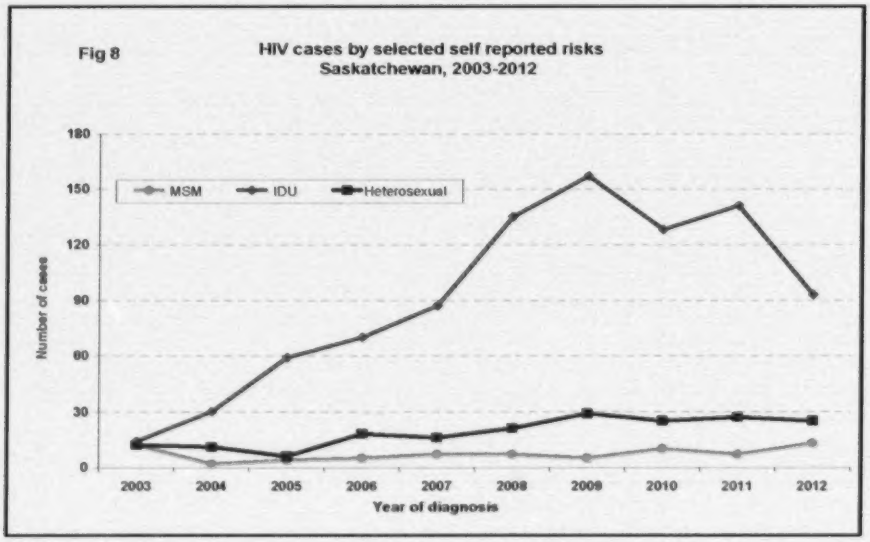
People self reporting as Aboriginal ethnicity continue to be highly represented among the number of newly diagnosed HIV cases in the province. In 2012, 74% (131 cases) of all newly diagnosed HIV cases self-reported Aboriginal ethnicity (Figure 7). This percentage was a 7% decrease from the proportion in 2011 but is comparable to the previous six years.



Female cases reporting Aboriginal ethnicity comprised 82% (58 of 71 cases) of all female cases for 2012, while males self-reporting Aboriginal ethnicity made up 69% (73 of 106 cases) of all male cases this year.

Injecting drugs was the highest risk for acquiring infection as reported by people living with HIV

Information about risk exposures to the HIV virus is self-reported in Saskatchewan. Cases are assigned to an exposure according to a hierarchy of highest risk.



Injection drug use continues to be the most commonly reported risk exposure. The number of people with HIV infection from injection drug use increased to a peak of 157 cases in 2009, in part related to enhanced case finding. (Figure 8) In 2012, two thirds of cases (67%, 117 cases) self-reported injection drug use as their main exposure to the virus, a decrease from 76% of cases in 2011. Men comprised 55% of infected individuals self-reporting this exposure. The age range for all HIV cases in 2012 reporting injection drug use was 14 to 58 years. Close to half (45%) of male cases reporting injection drug use were between 25 and 44 years of age. Over half (59%) of female cases reporting this exposure were 20-44 years of age.

Heterosexual activity reported by HIV cases remains the second most commonly reported exposure risk, albeit in 2012 it was six-fold less frequently reported than injection drug use (18%, 32 cases). Heterosexual activity can include partnering with individuals at risk for contracting HIV. Since 2004, the highest proportion of heterosexually exposed cases has consistently been males 20-44 year age group (57%), though 18% of male cases over 45 years could not identify high risk heterosexual activity. Their female counterparts reporting heterosexual activity were 20-44 years (54%) with 8% over 45 years identifying heterosexual partnering with an individual with no risks for HIV.

Unlike other jurisdictions in Canada, in Saskatchewan, men engaging in sex with other men (MSM) has been a lesser reported risk among HIV positive individuals. In 2012, this risk exposure was reported by 9% (16 cases) of HIV positive individuals. This low percentage has been consistent over the past nine years but there was a slight upward trend in the number of individuals reporting this risk in 2012.

Endemic risk exposure includes people whose origin is in a country where HIV infection is endemic. From 2003-2012, 1% (17 cases) of HIV positive individuals reported this risk exposure. The number of HIV cases from endemic countries has dropped sharply over the past seven years to one to two cases annually.

No babies were born infected with HIV in 2012. Between 2002 and 2010, nine cases of perinatal transmission occurred: 2005 (3 babies), 2007 (4 babies) 2009 (1 baby) and 2010 (1 baby). Infected babies are born mainly to mothers who are unaware of their HIV status at time of delivery.

No risk exposures for HIV infection could be identified by two people in 2012.

The majority of people diagnosed with HIV since 2003 are still alive

Between 2003 and 2012, 1,314 people were diagnosed with HIV of whom 1,108 people (84%) are still alive. Of the 155 people where year of death is known, 113 lived with HIV between one and eight years following their diagnosis. Another 42 died in the same year they were diagnosed with HIV. The primary cause of death may not have been directly related to HIV infection.

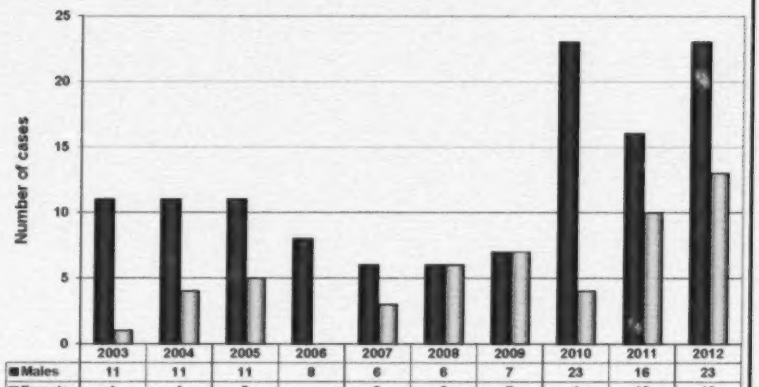
The profile of people living with AIDS in Saskatchewan

The number of females living with AIDS has increased

Over 330 people in Saskatchewan are living or have lived with an AIDS defining illness since 1984 when HIV/AIDS became a provincially notifiable disease. The thirteen female AIDS cases diagnosed in 2012 was the highest number of female AIDS cases reported in any one year since 1984. (Figure 9) This reflects the disease progression among HIV infected individuals to a diagnosis of AIDS. Nineteen of the 23 male AIDS cases (83%) in 2012 were in the 30-55 year age group (male case age range 19 to 67 years). Female AIDS cases ranged between 17 and 41 years of age.

The average length of time between first being tested positive for HIV and being diagnosed with AIDS in 2012 was 3.5 years (range 0 to 8 years). Almost half of the AIDS cases (16 of 36 cases) in 2012 had their initial HIV test at the same time they were diagnosed with an AIDS defining illness.

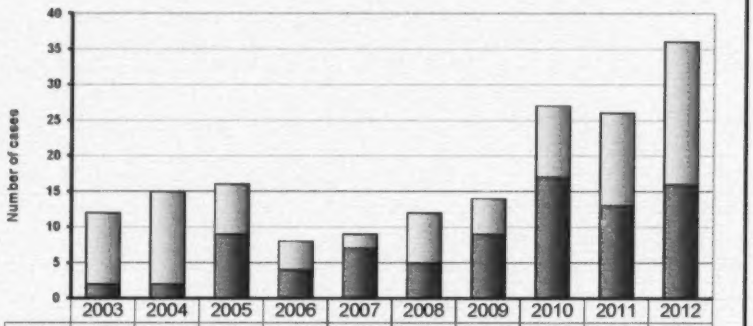
Fig 9 AIDS cases by year and sex
Saskatchewan, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Males	11	11	11	8	6	6	7	23	16	23
Females	1	4	5		3	6	7	4	10	13

Just under half of the 36 HIV cases whose infection progressed to AIDS in 2012 have died (16 deaths). (Figure 10) Five individuals who tested positive for HIV for the first time in 2012 had already progressed to AIDS and passed away.

Fig 10 AIDS cases by life status by year of diagnosis
Saskatchewan, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alive	10	13	7	4	2	7	5	10	13	20
Dead	2	2	9	4	7	5	9	17	13	16

Technical notes and Data Limitations

Notification of HIV and AIDS cases to the local Medical Health Officer and the Saskatchewan Ministry of Health is mandated by the Disease Control Regulations under *The Public Health Act, 1994*.

Surveillance data is reflective only of the number of cases who are tested and diagnosed with HIV. This data does not reflect those individuals who have not yet been identified. HIV is also reported based on the year of their first positive lab result, and therefore does not necessarily represent the number of new infections that year as individuals could test positive many years after acquiring the infection.

This report is based on the number of HIV cases diagnosed by laboratory confirmation while residing in the province of Saskatchewan. Cases that are known to be reported outside of Saskatchewan are not counted in this province's statistics.

Only first-time HIV diagnoses are included in this report. All repeat positive and follow-up tests are removed.

HIV cases have been assigned to the year in which they were first lab-confirmed since the date of infection cannot always be determined. The exception is infant cases born to infected mothers who are assigned by the infant's year of birth.

Individuals tested by Citizenship and Immigration Canada as part of the immigration process are not included in this report.

Health region proportions do not include Aboriginal people identified as living on First Nations reserves located within the boundaries of the regional health authorities. First Nations individuals known to be living on reserve at the time of HIV diagnosis are included in the "other health authorities" category.

Delays occur in the reporting of HIV and AIDS data, specifically for ethnicity and risk exposure categories, as well as for AIDS cases and death information. As updated information becomes available, case data may be reassigned based on this information. As such, numbers may differ at the time of next year's report.

Data in this report is based on information extracted by the Ministry of Health from the EpiData database on July 11, 2013.

Ethnicity is self-reported. For purposes of this report, Aboriginal persons comprise Inuit, Métis, and First Nations. The non-Aboriginal classification includes Caucasian, Black, Latin-American, Asian, South Asian and other.

Risk exposure information is self-reported, thus limiting the accuracy and completeness of the data. In this report HIV and AIDS cases are assigned to a single exposure category based on a nationally recognized hierarchy of risk. When more than one risk factor is provided, cases are classified as the exposure category that is highest in the hierarchy:

MSM – Men having sex with men

IDU – Injection Drug Use

Het-Exposure – Heterosexual exposure includes partnering with an individual at risk for HIV or partners who have no known risk for HIV

Endemic – Origin from an HIV endemic country

Perinatal – Born to an HIV positive mother

NIR – No identified risk, unknown risk and less likely sources of infection

Heterosexual exposure category in this report includes both those who report heterosexual contact with someone who is either HIV-infected or who is at increased risk for HIV infection. This category also includes those individuals where heterosexual contact is the only exposure activity reported.

Cases stating both MSM and IDU as their risk for acquiring HIV have been counted as an IDU risk exposure.

The annual incidence pattern of AIDS cases does not necessarily reflect the year in which the client was infected, but rather the year in which the individual was diagnosed with an AIDS defining illness.

All Saskatchewan HIV rates cited in this report are reported as crude rates. Rates were calculated by dividing the total number of HIV cases by the Saskatchewan covered population, expressed as the number of cases or events per 100,000 population.